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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,956	10/26/2001	Maurice Le Van Suu	00GE22054343	2754

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EXAMINER

WARE, CICELY Q

ART UNIT PAPER NUMBER

2634

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/045,956	LE VAN SUU, MAURICE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cicely Ware	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-19, 21, 32, 34-37, 39, 48 and 50-53 is/are rejected.
- 7) ☒ Claim(s) 20, 22-31, 33, 38, 40-47, 49 and 54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. Claims 17, 30 and 35 are objected to because of the following informalities:
  - a. Claim 17, line 14, examiner suggests inserting a ":" for clarification purposes.
  - b. Claim 30, line 3, applicant uses the phrase "sampling each the received". Examiner suggests using "sampling each received signal" for clarification purposes.
  - c. Claim 35, line 11, examiner suggests inserting a ":" for clarification purposes.Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 32 and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 32 and 48 recite a "first comparator" and "a comparator". A second comparator is not referenced in either of claims 32 nor 48. Examiner suggests that if applicant recites a first comparator then subsequently there should be a second comparator in the claim. Therefore claims 32 and 48 are not further treated on the merits.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 17, 35 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Barr (US Patent 4,763,357).

(1) With regard to claim 17, Barr discloses in (Fig. 1) a modulation/demodulation device (20, 120) capable of operating according to a plurality of modulation types (110, 210) each using a different carrier frequency (100, 200) and comprising: a

Art Unit: 2634

microprocessor (30, 130) for providing transmit digital information; a modulator (110, 210) for modulating, according to a given modulation type form among the plurality of modulation types, a transmit signal at a given carrier frequency based upon a signal of a predetermined duration representative of the transmit digital information; a sending/receiving device coupled to said modulator; and a demodulator (110, 210) coupled to said sending/receiving device and demodulating a received signal by: determining a given type of modulation and given carrier frequency for the received signal, and analyzing the received signal based upon given type of modulation to detect whether the received signal has the predetermined duration and supplying received digital information from the received signal to said microprocessor (abstract, col. 2, lines 25-32, col. 3, lines 12-17, 36-42, 56-61, col. 5, lines 24-30, 46-65, col. 6, lines 1-54, col. 7, lines 49-54, col. 8, lines 45-53, col. 9, lines 16-36, 58-60).

(2) With regard to claim 35, claim 35, inherits all the limitations of claim 17.

(3) With regard to claim 51, claim 51 inherits all the limitations of claim 17.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2634

8. Claims 18, 19, 21, 34, 36, 37, 39, 50, 52, 53 rejected under 35 U.S.C. 103(a) as being unpatentable over Barr (US Patent 4,763,357) as applied to claims 17, 35 and 51, in view of Lambert (US Patent 5,642,380).

(1) With regard to claim 18, claim 18 inherits all the limitations of claim 17.

However Barr does not disclose the modulator comprises a generator for generating the transmit signal at the given carrier frequency, and wherein said generator comprises: a memory for storing R digital codes each representative a sinusoid; at least one address counter for scanning successive addresses of the R digital codes at a frequency; a digital-to-analog converter coupled to said memory for converting the R digital codes and supplying an analog signal at the carrier frequency; and a bandpass filter coupled to said DAC for passing the analog signal at the carrier frequency.

However Lambert discloses in (Fig. 1) the modulator comprises a generator for generating the transmit signal at the given carrier frequency, and wherein said generator comprises: a memory (16) for storing R digital codes each representative a sinusoid; at least one address counter (14) for scanning successive addresses of the R digital codes at a frequency; a digital-to-analog converter (6) coupled to said memory for converting the R digital codes and supplying an analog signal at the carrier frequency; and a bandpass filter (8) coupled to said DAC for passing the analog signal at the carrier frequency (Fig. 2, col. 1, lines 5-8, 22-37, 54-65, col. 4, lines 11-13, 21-25).

It is well known in the art that an analog low pass filter is a bandpass filter.

Therefore it would have been obvious to one of ordinary skill in the art to modify Barr in view of Lambert to incorporate wherein the modulator comprises a generator for

generating the transmit signal at the given carrier frequency, and wherein said generator comprises: a memory for storing R digital codes each representative a sinusoid; at least one address counter for scanning successive addresses of the R digital codes at a frequency; a digital-to-analog converter coupled to said memory for converting the R digital codes and supplying an analog signal at the carrier frequency; and a bandpass filter coupled to said DAC for passing the analog signal at the carrier frequency in order to provide a non-constant symbol rate (Lambert, col. 2, lines 31-33, 44-50).

(2) With regard to claim 19, claim 19 inherits all the limitations of claim 18.

Lambert further discloses wherein the frequency is equal to R times the carrier frequency (col. 4, lines 43-46).

(3) With regard to claim 21, claim 21 inherits all the limitations of claim 18.

Lambert further discloses wherein the modulator comprises means for counting a number of cycles of said at least one address counter to determine the predetermined duration (col. 4, lines 44-67).

(4) With regard to claim 34, claim 34 inherits all the limitations of claim 17.

Lambert further discloses where in sending/receiving device sends the transmit signal to a remote site, and wherein said demodulator receives the received signal from the remote site via said sending/receiving device (col. 1, lines 22-33).

(5) With regard to claim 36, claim 36 inherits all the limitations of claims 35 and 18.

(6) With regard to claim 37, claim 37 inherits all the limitations of claims 36 and 19.

(7) With regard to claim 39, claim 39 inherits all the limitations of claim 36 and 21.

(8) With regard to claim 50, claim 50 inherits all the limitations of claims 35 and 34.

(9) With regard to claim 52, claim 52 inherits all the limitations of claims 51 and 18.

(10) With regard to claim 53, claim 53 inherits all the limitations of claims 52 and 19.

***Allowable Subject Matter***

9. Claims 20, 22-31, 33, 38, 40-47, 49, 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a modulation/demodulation device. Prior art references show similar methods but fail to teach: **“wherein at least one address counter comprises two address counters for scanning successive addresses at different frequencies”**, as in claims 20, 38; **“modulator further comprises means for determining the frequency of scanning of said at least one address counter based upon the carrier frequency and the number R”**, as in claims 22, 40; “the demodulator comprises: a plurality of bandpass filters each centered on a respective one of the

Art Unit: 2634

carrier frequencies and filtering the received signal", as in claims 23, 41, 54; **"selection circuit for cooperating with said encoding circuit for selecting among the filtered received signals from said bandpass filters"**, as in claims 24, 42; **"each gain controllable operational amplifier comprises: first, second, and third comparators"**, as in claims 25, 43; **"up/down counter: decrements the contents thereof when the filtered received signal input to said gain controllable operational amplifier is greater than the first, second, and third thresholds"**, as in claims 26, 44; **"up/down counter controls the network of switchable resistors to modify the feedback resistance"**, as in claims 27, 45; **"plurality of bandpass filters comprise switched capacitor type filter means"**, as in claim 28; **"each plurality of operational amplifiers comprise switched capacitor amplifier means"**, as in claim 29; **"means for counting the samples and determining a period of the signal; means for counting the number of periods of the received signal and determining whether the number of periods corresponds to a binary digit 1 or a binary digit 0"**, as in claims 30, 46; **"a translating circuit for translating and shaping the received signal"**, as in claims 31, 47; **"a first comparator, a second comparator"**, as in claims 33, 49.

### ***Conclusion***

10. The prior art made record and not relied upon is considered pertinent to applicant's disclosures:

a. Lightfoot et al. US Patent 5,917,537 discloses a level 1 gateway for video dial tone networks.

Art Unit: 2634

b. Cohen US Patent 4588856 discloses an automatic line impedance balancing circuit for computer/telephone communications interface.

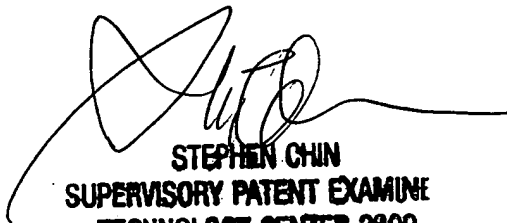
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*Cicely Ware*

cqw  
May 24, 2005



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